

**REMARKS**

Claims 1-18, 20-35, 37-43 and 51-65 are pending in this Application (claims 51-65 have been withdrawn from consideration). Claims 1-18, 20-35, and 37-43 were rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. Claims 10 and 39 and 40-41 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claims 1-8, 12, 13, 15-18 and 42-43 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,208,023 to Nakayama et al. (hereinafter "*Nakayama*") previously applied. Claims 11 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Nakayama*. Claims 20-27, 29-32, 34-35, 37-38 and 40-41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nakayama* in view of U.S. Patent 5,936,264 to Ishinaga (hereinafter "*Ishanaga*"). Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nakayama* in view of U.S. Patent 6,753,597 to Crowley et al. (hereinafter "*Crowley*"). Claims 28 and 33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nakayama* in view of *Ishanaga* as applied to claims 1, 20, 23, 27 and 32, and further in view of *Crowley*. Reconsideration of these rejections is respectfully requested in light of the following arguments, and entry of the claim amendments provided herewith is requested at least for the purpose of adopting the Examiner's suggestions and to reduce the number of issues for appeal.

Claims 1-18, 20-35 and 37-43 stand rejected under 35 U.S.C. 112 as failing to comply with the written description requirement. In particular, the Examiner asserts that there is no support in the specification for the limitations in claim 1 of "said lead has a (1) shaped end proximate the substrate and configured to minimize parasitic capacitance over a predetermined frequency range" and "the (2) encapsulant having a consistent dielectric constant over the predetermined frequency range," for the limitation in claim 40 of "the (1) terminal shaped end configured to minimize parasitic capacitance over a predetermined frequency range," and for the limitations of claim 42 of "said (1) lead has a shaped end configured to minimize parasitic capacitance over a predetermined frequency range" and "the (2) encapsulant material having a consistent dielectric constant over the

predetermined frequency range.” (Reference numbers added) This rejection is respectfully traversed.

The Examiner’s attention is called to page 5, lines 11 to 15, where it is stated that the “(1) bond wires are maintained at a minimal length and the (2) dielectric constant of the encapsulant material 12 is selected such that the performance of the device 10 is predictable, therefore (1, 2) enhancing the ability of the device 10 to minimize unwanted parasitics as the frequency of operation of signals coupled to the input terminal 14 increases.” Furthermore, at page 6, lines 16 to 18, it is noted that “since the (2) parasitic capacitance is a function of dielectric constant of the encapsulant material 12, its performance is further improved and more predictable.” Likewise, at page 8, lines 14 to 15 it is noted that the “(1) anode 71 has a shaped end surface operable to minimize parasitic capacitance,” and at lines 18 to 19 it is noted that the “(1) bond wire 22 could have a length comprising a fraction of the wavelength for which frequency the semiconductor device 70 is designed.” As noted at page 3, lines 1-6 of the specification, limiting the length of the bond wire to a fraction of a wavelength of the operating frequency limits the effect of parasitics. As support for the claim limitations objected to by the Examiner has been clearly demonstrated to be present in the specification, withdrawal of the rejection is respectfully requested.

Claims 10, 39 and 40-41 stand rejected under 35 U.S.C. 112 for being indefinite. Amendments are presented herewith to claim 10 to address the noted informality as to that claim. The Applicants submit that when the claims are construed in light of the specification, particularly FIGURES 7B and 7C, it is clear which dimensions are being claimed. Amendments are presented herewith to claim 40 to address the noted informality as to claims 40-41. Entry of these amendments is requested at least for the purpose of adopting the Examiner’s suggestions and to reduce the number of issues for appeal.

Claims 1-8, 12, 13, 15-18 and 42-43 stand rejected under 35 U.S.C. 102(e) as being anticipated by Nakayama. These rejections are respectfully traversed.

Nakayama fails to disclose each element of the invention of claims 1-8, 12, 13, 15-18 and 42-43. As discussed above, the limitations of a lead having a shaped end to minimize parasitic capacitance over a predetermined frequency range and an encapsulant having a consistent dielectric

constant over a predetermined frequency range are disclosed in the specification, and are lacking from Nakayama. For example, Nakayama does not even contain the terms “dielectric,” “capacitance,” or “minimize.” Nakayama does not discuss or even mention the dielectric constant of the molding resin 17. Likewise, Nakayama does not show the leads 15 having any shape other than a rectangular shape, unlike the exemplary shape of anode 71 in FIGURE 7B of the pending application, and does not even mention another exemplary embodiment shown in the specification of the pending application of configuring the lead so that the length of the bond wire is a fraction of the wavelength for which frequency the semiconductor device is designed. Withdrawal of the rejection of claims 1 and 42 is therefore requested. Claims 2-8, 12, 13, 15-18 and 43 are allowable at least for the reason that they depend from an allowable base claim and add limitations not found in the prior art.

Claims 11 and 14 stand rejected under 35 U.S.C. 103 over Nakayama. Claims 20-27, 29-32, 34-35, 37-38 and 40-41 stand rejected under 35 U.S.C. 103 over Nakayama in view of Ishinaga. Claim 9 stands rejected under 35 U.S.C. 103 over Nakayama in view of Crowley. Claims 28 and 33 stand rejected under 35 U.S.C. 103 as being unpatentable over Nakayama in view of Ishinaga and Crowley. As to claims 11, 14, 20-27, 29-32, 34-35 and 37-38, these claims are allowable at least for the reasons that they depend from an allowable base claim and add limitations not present in the prior art. It is further noted that neither Ishinaga nor Crowley remedy the shortcomings of Nakayama. For example, neither Ishinaga nor Crowley contains the terms “dielectric” or “capacitance” (Ishinaga also lacks the term “minimize;” Crowley uses the “minimize,” but only in regards to minimizing the effects of moisture). Neither do these references discuss or even mention the dielectric constant of the resin used to encapsulate the various components disclosed in the references. Withdrawal of these rejections is respectfully requested.

In regards to claims 40-41, the means coupling the terminal to the light emitting semiconductor invokes the provisions of 35 U.S.C. 112, para. 6, which requires that the Examiner identify the corresponding structure disclosed in the specification and identify that structure or an equivalent thereof in the cited art. As previously discussed, an exemplary structure is disclosed at page 8, lines 18 to 19, where it is noted that the “(1) bond wire 22 could have a length comprising a

fraction of the wavelength for which frequency the semiconductor device 70 is designed.” Furthermore, it is discussed at page 3, lines 1-6 of the specification that limiting the length of the bond wire to a fraction of a wavelength of the operating frequency limits the effect of parasitics. Neither Nakayama, Ishinaga nor Crowley include the term “wavelength” or disclose that the bond wire structure should be limited in length to a fraction of the wavelength for which frequency the semiconductor device is designed. As such, there is no motivation discussed in the cited art to modify the bond wire length to provide the disclosed structure or an equivalent thereof. Withdrawal of these rejections is respectfully requested.

**CONCLUSION**

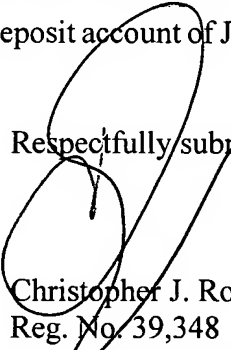
In view of the foregoing remarks and for various other reasons readily apparent, Applicants submit that all of the claims now present are allowable, and entry of the amendments, withdrawal of the rejection and a Notice of Allowance are courteously solicited.

If any impediment to the allowance of the claims remains after consideration of this amendment, a telephone interview with the Examiner is hereby requested by the undersigned at (214) 953-5990 so that such issues may be resolved as expeditiously as possible.

If any applicable fee or refund has been overlooked, the Commissioner is hereby authorized to charge any fee or credit any refund to the deposit account of Jackson Walker L.L.P., No. 10-0096.

Date: September 25, 2006

Respectfully submitted,

  
Christopher J. Rourk  
Reg. No. 39,348  
Attorney for Applicants

Jackson Walker L.L.P.  
901 Main Street, Suite 6000  
Dallas, Texas 75202  
Telephone: 214.953.5990  
Facsimile: 214.661.6604  
E-Mail: crourk@jw.com